



## City Fact Sheet: Columbus, Ohio

### URBAN CLIMATE ASSESSMENT SERIES

Columbus is facing climate-related issues that include increasing heavy precipitation events, possibly leading to greater flood risk and reduced water quality, and drier and hotter summers. Columbus also faces increasingly frequent water issues, including flooding events and drinking water contamination from algae and nitrates. City leaders are actively addressing climate adaptation measures and have charged the Columbus Green Team, Climate and Energy Working Group to develop adaptation and mitigation measures.

The Columbus Office of Environmental Stewardship partnered with the Columbus Department of Public Health, OSU's Byrd Polar and Climate Research Center, the Natural Resources Defense Council, the Columbus Foundation, and the University of Michigan Climate Center to develop a climate change vulnerability assessment. This assessment will serve as the foundation of future community engagement and climate adaptive measures for business, health, environment, utility and administration sectors.

### CLIMATE HISTORY

Changes from 1951 to 2012 include:

- 2.3°F increase in average annual temperatures
- 25.5 more days in the frost free season
- 78% increase in days with 1.25" or more precipitation
- 19.8% increase in annual precipitation

### QUICK FACTS

- + Located in the center of Ohio, the City of Columbus has approximately 835,000 residents and is the 15th most populous city in the United States.
- + Median household income is approximately \$56,000 (per 2014 census data).
- + Columbus is home to The Ohio State University (OSU).
- + The Scioto River Watershed supplies Columbus with 85% of its drinking water.
- + The city has a large footprint of 223 square miles, with approximately 3,500 miles of waterlines, 4,500 miles of sewer, and 6,000 lane miles of roadway being part of city-managed infrastructure.



## KEY CONSIDERATIONS

The Columbus Green Team identified eight impact areas, based on climate projections for the City of Columbus, including: extreme heat, deteriorated air quality, greater flood risk, decreased water availability, deteriorated water quality, changing seasonal precipitation, longer growing season, and shifting natural resources. The climate change vulnerability assessment findings will be integrated into the city's heat response and emergency preparedness plans in late 2016.

Despite the issues noted above, predictions about how climate change may impact Columbus are not as severe, when compared to cities in coastal or desert regions. A lower threat level presents a challenge in garnering support among residents for climate adaptation measures.

To address these challenges, City of Columbus leaders identified climate mitigation and adaptation strategies. Leaders set a goal to reduce greenhouse gas emissions by 30% from city operations and by 20% from the community by the year 2020. The Columbus Green Team planned climate adaptation projects and executed goals for mitigation. Enhancements include adding greenspace downtown, increasing the urban tree canopy, establishing recycling and bike sharing programs, and reducing the number of sewer overflows.

## ADDITIONAL EFFORTS

Climate adaptation plans for Columbus include efforts to address the Scioto River Watershed, which supplies Columbus with 85% of its drinking water. The City's Sustaining Scioto Plan, which was featured in the Global Cities 100 Report, seeks to create a resilient clean water supply from the Scioto River to the City of Columbus. The plan highlights the potential for more frequent and severe heat waves, droughts, and storm events in the future. Implementing this plan will help maintain a clean and resilient water supply for the City of Columbus. Strategies from the plan include:

- Keeping the Scioto River clean to lower water treatment costs and water rates for residents.
- Improving water management to reduce the risk of waterborne diseases.
- Assessing groundwater for growth of the city and use for irrigation.
- Ensuring that rivers, streams, and reservoirs in Columbus remain clean and enjoyable public spaces for residents.
- Developing emergency power supply plans.

Recommendations from the Sustaining Scioto Plan were integrated into the city's Watershed Master Plan, with implementation to begin in 2017. The Plan also confirmed the necessity for the city's reservoir and the need to continuously monitor the climate and examine the adequacy of water resources.

### SUPPORT

The U-M Climate Center transforms climate research into accessible information and dynamic strategies empowering stakeholders to address climate-related challenges and opportunities. We believe that diversity is key to individual empowerment, and the advancement of sustainability knowledge, learning and leadership. The Center is part of the Graham Sustainability Institute, which integrates faculty and student talent across U-M, and partners with external stakeholders to foster collaborative sustainability solutions at all scales. See: [www.graham.umich.edu/climate](http://www.graham.umich.edu/climate)

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## LEARN MORE

City of Columbus Public Health,  
Environmental Health Awareness:  
[https://www.columbus.gov/publichealth/  
programs/Environmental-Protection/  
Environmental-Health-Awareness/](https://www.columbus.gov/publichealth/programs/Environmental-Protection/Environmental-Health-Awareness/)

City of Columbus, Get Green Columbus:  
<http://www.columbus.gov/getgreen>

Sustaining Scioto Plan:  
[http://www.morpc.org/Sustainability/  
greenways-water-quality/sustaining-scioto/  
index](http://www.morpc.org/Sustainability/greenways-water-quality/sustaining-scioto/index)